

## **REMARKS/ARGUMENTS**

The applicant acknowledges, with thanks, the Office Action dated July 15, 2011. Examiner's withdrawal of the finality of the previous Office Action is noted with appreciation. Claims 1, 7, 8, 11, 13, and 16 have been amended herein. Claims 5, 9, 10, 12, 14, 15, and 17 have been canceled. Accordingly, claims 1-4, 6-8, 11, 13, and 16 are currently pending.

The cancellation of claims 5, 9, 10, 12, 14, 15, and 17 should not be construed to be an admission that the claims are unpatentable over the art of record or that the references applied are considered to be material to patentability for the claimed inventions. In addition, no subject matter is or is intended to be surrendered and applicant reserves the right to pursue the subject matter of the cancelled and/or original claims in one or more continuation and/or divisional application(s).

Reconsideration of the application is respectfully requested.

### **The Office Action**

Claims 1, 2, 4, 8-10 and 13-15 were rejected under 35 U.S.C. §102(b) as being anticipated by European Application No. EP 0 344 032 to Beretta (*hereinafter*, "Beretta"). Claims 8, 9, 12, 13, 14, and 17 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,800,791 to Ainscow (*hereinafter*, "Ainscow"). Claims 3, 11, and 16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Beretta, in view of U.S. Patent No. 2,535,944 to Mathy (*hereinafter*, "Mathy"). Claim 6 was rejected under 35 U.S.C. §103(a) as being unpatentable over Beretta.

### **The Art Matters**

As noted above, claims 1, 2, 4, 8-10 and 13-15 were rejected as being anticipated by Beretta, claims 8, 9, 12, 13, 14, and 17 were rejected as being anticipated by Ainscow, claims 3, 11, and 16 were rejected as being unpatentable over Beretta, in view of Mathy, and claim 6 was rejected as being unpatentable over Beretta. However, the Examiner indicated in the Office Action that the prior art does not disclose or adequately suggest a multi-phase reactor comprising several units mounted in the reactor from the top to the bottom, wherein, in particular, each unit comprises axisymmetric body, an annular axisymmetric body, and a reactor shell integrated together to form the unit; and the axisymmetric body is formed by rotating a single curved line

without a straight line portion, as a generatrix, around the axis; said single curved line being comprised of at least two curved portions having different radii.

In view of the amendments and arguments set forth below, it is submitted that all pending claims are patentably distinct over the art of record.

Claims 1-4, 6 and 7 are in Condition for Allowance:

Claim 1 has been amended to include the features of allowable claim 5 therein. In particular, claim has been amended to include the features of the axisymmetric body, the annular axisymmetric body, and the reactor shell being integrated together to form a unit, and wherein several of the units are mounted in the reactor from the top to the bottom.

As noted above, the Examiner indicated in the Office Action that the prior art does not disclose or adequately suggest a multi-phase reactor comprising several units mounted in the reactor from the top to the bottom, and other particular features of each unit, wherein those features are now included in the independent claim.

For at least these reasons, it is respectfully submitted that independent claim 1 and claims 2-4, 6, and 7 dependent therefrom are novel, patentably distinct and unobvious over the art of record.

Claims 8 and 11 are in Condition for Allowance:

Claim 8 has been amended to include the features indicated by the Examiner to be allowable. In particular, claim has been amended to include the features of the annular body member being axisymmetric relative to the axis, the rotator body member being axisymmetric relative to the axis, the axisymmetric rotator body member being formed by rotating a single curved line without a straight line portion and comprised of at least two curved portions having different radii, as a generatrix, around the axis, the axisymmetric annular body member and the axisymmetric rotator body member collectively forming an integrated rotary built-in member, and wherein a plurality of the integrated rotary built-in members are arranged relative to the cylindrical reactor shell along the axis.

As noted above, the Examiner indicated in the Office Action that the prior art does not disclose or adequately suggest a multi-phase reactor comprising several units mounted in the

reactor from the top to the bottom, and other particular features of each unit, wherein those features are now included in the independent claim.

For at least these reasons, it is respectfully submitted that independent claim 8 and claim 11 dependent therefrom are novel, patentably distinct and unobvious over the art of record.

Claims 13 and 16 are in Condition for Allowance:

Claim 13 has been amended to include the features indicated by the Examiner to be allowable. In particular, claim has been amended to include the features of the annular body member being axisymmetric relative to the axis, the rotator body member being axisymmetric relative to the axis, the axisymmetric rotator body member being formed by rotating a single curved line without a straight line portion and comprised of at least two curved portions having different radii, as a generatrix, around the axis, the axisymmetric annular body member and the axisymmetric rotator body member collectively forming an integrated rotary built-in member, and wherein a plurality of the integrated rotary built-in members are arranged relative to the cylindrical reactor shell along the axis.

As noted above, the Examiner indicated in the Office Action that the prior art does not disclose or adequately suggest a multi-phase reactor comprising several units mounted in the reactor from the top to the bottom, and other particular features of each unit, wherein those features are now included in the independent claim.

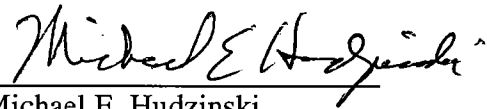
For at least these reasons, it is respectfully submitted that independent claim 13 and claim 16 dependent therefrom are novel, patentably distinct and unobvious over the art of record.

### Conclusion

In accordance with the afore-noted amendments and comments, it is submitted that all claims are novel, patentably distinct and unobvious over the art applied in the Office Action, and in condition for allowance thereover. An early allowance of all claims is respectfully requested.

If there are any fees necessitated by the foregoing communication, the Commissioner is hereby authorized to charge such fees to our Deposit Account No. 50-0902, referencing our Docket No. 078199/000002.

Respectfully submitted,



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